

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Parry et al.

Title: CONSUMABLE RESOURCE
ACCESS CONTROL

Appl. No.: 10/829,644

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Examiner: Pccso, Thomas R.

Art Unit: 2132

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AMENDMENT AND REPLY UNDER 37 CFR 1.116

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Sir:

This communication is responsive to the Final Office Action dated September 14, 2010, concerning the above-referenced patent application.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this document.

Remarks/Arguments begin on page 8 of this document.

Please amend the application as follows:

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An image-forming system comprising:
 - an image-forming device;
 - a first consumable resource configured to be consumed by the device in forming a printed image;
 - an authorization granting interface coupled to the resource and configured based upon authorized users of the resource;
 - a user interface configured to receive authorization input from a prospective user; and
 - a processor in communication with the user interface, wherein the processor is configured to determine if a prospective user is authorized to use the resource based upon the authorization input and interaction with the granting interface, wherein the authorization granting interface is configured to remain coupled to unused portions of the consumable resource upon withdrawal of the unused portions of the consumable resource from the image forming device, wherein the authorization granting interface is configured to remain coupled to unused portions of the consumable resource upon withdrawal of the unused portions of the consumable resource from the image forming device, wherein the authorization granting interface is configured to grant a first authorization level in which use of the resource by a first user is denied, a second authorization level in which a second user is granted a first extent of rights to use the resource and a third authorization level in which a third user is granted a second extent of rights, different than the first extent of rights, to use the resource.
2. (Original) The system of Claim 1, wherein the user interface is configured to indicate to the prospective user whether the prospective user is authorized in response to control signals generated by the processor.
3. (Original) The system of Claim 2, wherein the processor is configured to prevent use of the resource by the prospective user when the prospective user is not authorized and to permit use of the resource when the prospective user is authorized.
4. (Original) The system of Claim 1, wherein the processor is configured to prevent use of the resource by the prospective user when the prospective user is not authorized and to permit use of the resource when the prospective user is authorized.

5. (Original) The system of Claim 1 including a memory configured to receive and store authorization input.
6. (Original) The system of Claim 1, wherein the resource includes a printing material configured to be deposited upon a medium.
7. (Original) The system of Claim 6, wherein the printing material comprises an ink.
8. (Original) The system of Claim 6, wherein the printing material includes a toner.
9. (Original) The system of Claim 1, wherein the resource is contained within a cartridge.
10. (Original) The system of Claim 9, wherein the authorization granting interface includes a digital memory coupled to the cartridge.
11. (Original) The system of Claim 1, wherein the authorization granting interface includes a digital memory coupled to the cartridge.
12. (Original) The system of Claim 1, wherein the resource comprises a print medium upon which the printed image is formed.
13. (Original) The system of Claim 1, wherein the user interface includes at least one of a mouse, a microphone, a keyboard and a stylus.
14. (Original) The system of Claim 1, wherein the device includes an authorization receiving interface having at least one electrically conductive contact and wherein the authorization granting interface comprises at least electrically conductive contact.
15. (Original) The system of Claim 1, wherein the authorization granting interface is configured to grant and deny use of the resource.
16. (Original) The system of Claim 15, wherein the authorization granting interface is configured to grant varying levels of authorization to use of the resource.
17. (Original) The system of Claim 1, wherein the authorization granting interface is configured to grant varying levels of use of the resource.
18. (Original) The system of Claim 1, wherein the processor is fixedly coupled to the device.
19. (Original) The system of Claim 1, wherein the processor is fixedly coupled to the resource.

20. (Original) The system of Claim 1, wherein the user interface is configured to receive authorization input from a prospective user comprising a person.

21. (Original) The system of Claim 1, wherein the user interface is configured to receive authorization input from a prospective user comprising a device.

22. (Currently Amended) A consumable resource access control unit comprising:
a consumable resource; and

an authorization granting interface coupled to the consumable resource and configured based upon authorize and d users of the resource, wherein the authorization granting interface is configured to remain coupled to unused portions of the consumable resource upon withdrawal of the unused portions of the consumable resource from the image forming device, wherein the authorization granting interface identifies a plurality of persons or groups of persons, each of the plurality of persons or groups of persons assigned a different extent of rights to use the resource.

23. (Original) The control unit of Claim 22 including a cartridge containing the consumable resource, wherein the authorization granting interface is coupled to the cartridge.

24. (Original) The control unit of Claim 22, wherein the consumable resource comprises a printing material.

25. (Original) The control unit of Claim 24, wherein the printing material is selected from a group including toner and ink.

26. (Original) The control unit of Claim 22, wherein the consumable resource comprises a print medium.

27. (Original) The control unit of Claim 22 including a memory coupled to the consumable resource and in communication with the authorization granting interface, wherein the memory stores authorized user data.

28. (Original) The control unit of Claim 22 including a programmable medium coupled to the cartridge and providing the authorization data.

29. (Previously Presented) The control unit of Claim 22 including a chamber containing the consumable resource and a code coupled to the chamber and configured to be read by an optical scanning device, the code providing the authorization data.

30. (Original) The control unit of Claim 22, wherein the authorization granting interface is configured to grant and deny use of the resource.

31. (Original) The control unit of Claim 30, wherein the authorization granting interface is configured to grant varying levels of authorization to use of the resource.

32. (Previously Presented) The control unit of Claim 22, wherein the authorization granting interface is configured to grant varying non-zero levels of use of the resource.

33. (Original) The control unit of Claim 22 including a processor.

34. (Previously Presented) An image-forming device comprising:

a printing mechanism configured to print images;

a dock configured to removably receive a cartridge containing a consumable resource for use by the device to form a product having a printed image;

a user interface configured to receive an identity of a person;

a sensor configured to identify authorization data associated with the cartridge, the authorization data comprising identification of persons or groups of persons and portions of the consumable resource allotted to each person or groups of persons; and

a controller configured to limit use of the resource by the device based upon identified authorization data associated with the cartridge, wherein the controller is configured to permit use of a predetermined portion of the resource by the device based upon a comparison of identified authorization data associated with the cartridge and the identity of the person received by the user interface.

35. (Canceled)

36. (Canceled)

37. (Original) The device of Claim 34, wherein the dock is configured to receive a cartridge containing toner and wherein the print mechanism includes a photoconductive drum.

38. (Original) The device of Claim 34, wherein the dock is configured to receive a cartridge containing a fluid and wherein the print mechanism includes a fluid dispensing printhead.

39. (Canceled)

40. (Canceled)

41. (Original) The device of Claim 34, wherein the controller is configured to prevent any use of the resource by individuals not included in the authorization data.

42. (Original) The device of Claim 34 including a notification mechanism configured to notify unauthorized individuals that they are not authorized to use the resource.

43. (Original) The device of Claim 42, wherein the notification mechanism includes a visual display.

44. (Original) The device of Claim 34 including a user interface configured to receive authorization identification from a user requesting the use of the consumable resource.

45. (Canceled)

46. (Canceled)

47. (Canceled)

48. (Canceled)

49. (Canceled)

50. (Canceled)

51. (Canceled)

52. (Cancelled)

53. (Cancelled)

54. (Previously Presented) The system of claim 1 wherein the authorization granting interface identifies a person who is authorized to use the resource.

55. (Previously Presented) The control unit of claim 22 wherein the authorization granting interface identifies a person who is authorized to use the resource.

56. (Canceled)

57. (Previously Presented) The control unit of claim 22, wherein the authorization granting interface is configured to grant a first authorization level in which use of the resource by a first user is denied, a second authorization level in which a second user is granted a first extent of rights to use the resource and a third authorization level in which a third user is granted a second extent of rights, different than the first extent of rights, to use the resource.

58. (Previously Presented) The system of Claim 1, wherein the processor is configured to allow limited non-zero use of the first consumable resource in the image forming device.

59. (Previously Presented) The system of claim 1, wherein the processor is configured to prevent the prospective user from using the first consumable resource in the image forming device based on input of a first authorization input and interaction with the granting device by the first prospective user, wherein the processor is configured to allow the prospective user to use a second consumable resource in the image forming device based upon input of the first authorization input and interaction with the granting device by the first prospective user.

60. (Previously Presented) The device of claim 34, wherein the predetermined portion is less than all of the resource contained in the cartridge.

61. (Previously Presented) The system of Claim 1, wherein the processor is configured to determine if the prospective user is authorized to use the resource based upon a comparison of the authorization input and interaction with the granting interface, wherein the prospective user is authorized to use the resource if the authorization input and interaction with the granting interface satisfy a predefined relationship.

62. (Canceled)

63. (New) A consumable resource access control unit comprising:

a consumable resource, wherein the consumable resource comprises a print medium; and

an authorization granting interface coupled to the consumable resource and configured based upon authorize and d users of the resource, wherein the authorization granting interface is configured to remain coupled to unused portions of the consumable resource upon withdrawal of the unused portions of the consumable resource from the image forming device.

64. (New) A consumable resource access control unit comprising:

a consumable resource;

an authorization granting interface coupled to the consumable resource and configured based upon authorize and d users of the resource, wherein the authorization granting interface is configured to remain coupled to unused portions of the consumable resource upon withdrawal of the unused portions of the consumable resource from the image forming device; and

a chamber containing the consumable resource and a code coupled to the chamber and configured to be read by an optical scanning device, the code providing the authorization data.

65. (New) A consumable resource access control unit comprising:

a consumable resource;

an authorization granting interface coupled to the consumable resource and configured based upon authorize and d users of the resource, wherein the authorization granting interface is configured to remain coupled to unused portions of the consumable resource upon withdrawal of the unused portions of the consumable resource from the image forming device, wherein the authorization granting interface is configured to grant a first authorization level in which use of the resource by a first user is denied, a second authorization level in which a second user is granted a first extent of rights to use the resource and a third authorization level in which a third user is granted a second extent of rights, different than the first extent of rights, to use the resource.

66. (New) An image-forming system comprising:

an image-forming device;

a first consumable resource configured to be consumed by the device in forming a printed image, wherein the resource comprises a print medium upon which the printed image is formed;

an authorization granting interface coupled to the resource and configured based upon authorized users of the resource;

a user interface configured to receive authorization input from a prospective user;
and

a processor in communication with the user interface, wherein the processor is configured to determine if a prospective user is authorized to use the resource based upon the authorization input and interaction with the granting interface.

REMARKS

This Reply is in response to the Final Office Action mailed on September 14, 2010 in which claims 34, 37, 38, 41-44 and 60 were allowed; in which claims 12, 26, 29, 56, 57 and 62 were objected to; and in which claims 1-11, 13-25, 27, 28, 30-33, 45 -51, 54, 55, 58, 59 and 61 were rejected. With this response, the claims are amended so as to place the application in condition for allowance. In particular, claims 45-51, 56 and 62 are canceled; claims 1 and 22 are amended; and claims 63-66 are added. Claims 1-12, 13-34, 37-38, 41-44, 54-55, 57-61 and 63-66 are presented for reconsideration and allowance.

I. Rejection of claims 46-51 under 35 USC 102(a) or 102(e) based upon Asakura

Section 9 of the Office Action rejected claims 46-51 under 35 USC 102(a) or 102(e) as being anticipated by Asakura US Patent 6711362. Claims 46-51 are canceled, rendering the rejection moot.

II. Rejection of claims 1-11, 13-15, 18-25, 27, 28, 30, 33, 45 -51, 54, 55, 59 and 61 under 35 USC 103(a) based upon Hanaoka and Asakura

Section 12 of the Office Action rejected claims 1-11, 13-15, 18-25, 27, 28, 30, 33, 45 -51, 54, 55, 59 and 61 under 35 USC 103(a) as being unpatentable over Hanaoka US Patent Publication 2006/0045595 in view of Asakura US Patent 6711362. Claims 46-51 are canceled. Claim 1 is amended to incorporate the limitations of former objected to claim 56. Claim 22 is amended to incorporate the limitations of former objected to claim 62. Accordingly, claims 1-11, 13-15, 18-25, 27, 28, 30, 33 and 45, as amended, overcome the rejection and are believed to be in condition for allowance.

III. Added Claims

With this response, claims 63-66 are added. Claim 63-66 are believed to be patentably distinct over the prior art of record.

Claim 63 constitutes former objected claim 26 rewritten in independent form to include all of the limitations of former base claim 22. Claim 64 constitutes a former objected to claim 29 rewritten in independent form to include all of the limitations of former base claim 22. Claim 65 constitutes former objected to claim 57 rewritten in independent form to include all of the limitations of former base claim 22. Claim 66 constitutes former objected to claim 12 rewritten in independent form to include all of the limitations of former base claim 1. Accordingly, each of added claims 63-66 are presented for consideration and allowance.

IV. Conclusion

After amending the claims as set forth above, claims 1-12, 13-34, 37-38, 41-44, 54-55, 57-61 and 63-66 are now pending in this application.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 08-2025. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 08-2025. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 08-2025.

Atty. Dkt. No. 200312834-1

Respectfully submitted,

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By /Todd A. Rathe/

RATHE PATENT & IP LAW
Customer No. 22879
Telephone: (262) 478-9353
Facsimile: (262) 238-1469

Todd A. Rathe
Attorney for Applicant
Registration No. 38,276